

Claims

What is claimed is:

1. An imaging lens, comprising:
a lens system, the lens system including, in order from an object side:
a positive first lens with a convex surface facing the object side;
an aperture stop provided on one of the object side and an image side of the first lens;
a meniscus second lens with a concave surface facing the object side; and
a meniscus third lens with a convex surface facing the object side;

wherein:

- at least one of the first lens and the second lens includes an aspheric surface;
- the third lens is a biaspheric lens;
- the second lens and the third lens have paraxial focal lengths with different signs; and
- the following condition is satisfied,

$$1.25 < v_{\max} / v_{\min},$$

where v_{\max} and v_{\min} are a maximum Abbe number and a minimum Abbe number among the lenses, respectively.

2. The imaging lens according to claim 1, wherein:
at least one of the first lens and the second lens of the lens system is a biaspheric lens.

3. The imaging lens according to claim 1, wherein:
at least one biaspheric lens of the lens system satisfies the following condition,

$$1.0 < t_{\max} / t_{\min} < 1.4,$$

where t_{\min} and t_{\max} are thicknesses of a thinnest part and a thickest part of the biaspheric lens, respectively, measured parallel to an optical axis in an effective diameter in which a light beam passes through.

4. The imaging lens according to claim 1, wherein:
any aspheric surface of a biaspheric lens of the lens system includes a plurality of points of inflection in an effective diameter in which a light beam passes through.

5. The imaging lens according to claim 1, wherein:
the aperture stop of the lens system is provided on the object side of the first lens.

6. The imaging lens according to claim 1, wherein:
the lens system includes at least a single resin lens.

7. The imaging lens according to claim 1, wherein:
the following condition is satisfied,

$$L/f < 2.0,$$

where L and f are a total length of the lens system and a focal length of the lens system, respectively.

8. An imaging lens, comprising, in order from an object side:
an aperture stop;
a biconvex positive first lens;
a negative meniscus second lens with a concave surface facing the object side; and
a positive meniscus third lens with a convex surface facing the object side, wherein:
at least one of the first lens and the second lens includes an aspheric surface;
the third lens is a biaspheric lens; and
the following condition is satisfied,

$$2.5 < (v_1 + v_3) / v_2,$$

where v_1 , v_2 , and v_3 are Abbe numbers of the first lens, the second lens, and the third lens, respectively.

9. An imaging lens, comprising, in order from an object side:
- an aperture stop;
 - a positive first lens with a convex surface facing the object side;
 - a positive meniscus second lens with a concave surface facing the object side;
 - a negative meniscus third lens with a convex surface facing the object side, wherein:
 - at least one of the first lens and the second lens includes an aspheric surface;
 - the third lens is a biaspheric lens; and
 - the following condition is satisfied,

$$v_3 < 45,$$

where v_3 is an Abbe number of the third lens.